

Permitting Decisions- Environment Agency Initiated Variation

We have issued an Environment Agency initiated variation for Alconbury Used Coffee to Advanced Biofuel Demonstration Centre operated by Bio-Bean Limited following a review of the permit in accordance with Environmental Permitting (England and Wales) Regulations 2016, regulation 34(1).

The variation number is EPR/KP3133AS/V004.

We consider in reaching this decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Permit Review

This Environment Agency has a duty, under the Environmental Permitting (England and Wales) Regulations 2016 (EPR), regulation 34(1), to periodically review permits.

Article 21(3) of the Industrial Emissions Directive (IED) also requires the Environment Agency to review conditions in permits to ensure that they deliver compliance with relevant standards, within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions.

We have reviewed the permit for this activity and varied the notice to make a number of changes to reflect relevant standards and current best practice. These changes principally relate to the implementation of our technical guidance Non-hazardous and inert waste: appropriate measures for permitted facilities and the relevant requirements of the BAT Conclusions for Waste Treatment, which have been incorporated into our guidance.

In this decision document, we set out the reasoning for the variation notice that we have issued.

It explains how we have reviewed and considered the techniques used by the operator against our technical guidance.

As well as considering the review of the operating techniques used by the operator, the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issue.

Purpose of this document

This decision document provides a record of the decision-making process. It:

- explains how the Environment Agency initiated variation has been determined;
- summarises the decision making process in the decision considerations section to show how the main relevant factors have been taken into account;
- highlights key issues in the determination.

Read the permitting decisions in conjunction with the environmental permit and the variation notice.

Key issues of the decision

Environment Agency led variation – permit review

We have carried out an Environment Agency initiated variation to the permit following a permit review as required by legislation to ensure that permit conditions deliver compliance with relevant legislative requirements and appropriate standards to protect the environment and human health.

The Industrial Emissions Directive (IED) came into force on 7 January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) Conclusions as described in the Commission Implementing Decision. Article 21(3) of the IED requires us to review conditions in permits issued and to ensure that the permit delivers compliance with relevant standards. This must be within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions.

The BAT Conclusions for Waste Treatment (the BREF) was published on 17 August 2018 following a European Union wide review of BAT, implementing decision (EU) 2018/1147 of 10 August 2018. Relevant existing facilities must be in compliance with the BAT Conclusions within 4 years.

Our technical guidance Non-hazardous and inert waste: appropriate measures for permitted facilities explains the standards that are relevant for regulated facilities with an environmental permit to treat or transfer non-hazardous wastes.

We issued a notice under regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 28/04/2021 requiring the operator to provide information to confirm that the operation of their facility currently meets, or how it will subsequently meet, the standards in the Waste Treatment BAT Conclusions.

The notice required the operator to:

1. Provide a brief non-technical description of the regulated facility, including
 - all listed activities, waste operations and registered waste exemptions (if any).
 - a list of wastes handled at the site, the key stages in the “process” and the relevant disposal and recovery operations.
 - the scale of the operation i.e., the waste storage and daily treatment capacity of the process.
 - a brief description of the principal releases to air, land and water including noise, dust and odour, along with a description of any abatement techniques and site plan.
 - description of the site location and any key sensitive receptors.
2. Identify the BAT Conclusions that are applicable to the facility’s operations. Confirm whether or not the operations comply with the requirements.
3. Where operations are not currently complying, the operator was required to provide:
 - details of how the relevant standards and requirements will be met.
 - details of how they will fully comply with the requirement by 17 August 2022.
 - justification as to why an alternative technique is appropriate and will achieve an equivalent level of environmental protection to the standards in the BAT Conclusion.
 - details of any activities they intend to cease operating by the compliance date (August 2022).
4. Confirm whether they operate a medium combustion plant or specified generator (as per Schedule 25A or 25B of EPR 2016).

The Non-hazardous and inert waste: appropriate measures for permitted facilities guidance was published on 12 July 2021 on gov.uk. This technical guidance explains the standards that are relevant to regulated facilities with an environmental permit to store, treat or transfer non-hazardous waste, providing relevant standards (appropriate measures) for those sites. The operators were notified about the new guidance and were advised to consider them in their submissions.

The standards described in our technical guidance are split into chapters:

- General management appropriate measures
- Waste pre-acceptance, acceptance and tracking appropriate measures
- Waste storage, segregation and handling appropriate measures
- Waste treatment appropriate measures
- Emissions control appropriate measures
- Emissions monitoring and limits appropriate measures
- Process efficiency appropriate measures

Our assessment of the responses received from the operator are summarised in Table 1.

The Regulation 61 Notice required the operator to confirm whether they could comply with the standards described in each of these chapters. Table 1 below provides a summary of the response received and our assessment of it. The overall status of compliance with the standards (appropriate measures) is indicated in the table as:

NA – Not Applicable

CC – Currently Compliant

FC – Compliant in the future (through improvement conditions set in permit)

NC/IC – Not Compliant; Improvement/New Condition included

Extent of this review

We have reviewed the operations that relate to the Installation activities in this permit against the relevant requirements of Best Available Techniques (BAT) Conclusions set out in implementing decision (EU) 2018/1147 of 10 August 2018.

Regulation 61 Response

The Regulation 61 notice response from the Operator was received on 17/09/2021.

We considered that the response contained sufficient information for us to commence determination of the permit review.

This response is available on our public register.

The documents submitted by the operator which now form part of the operating techniques that the operator must implement are specified in table S1.2 in the environmental permit. These include:

- Documents received in response to the Regulation 61 Notice.
- Email from the operator advising the Environment Agency to remove the following waste codes from Table S2.2 of the permit: 02 03 01, 02 03 03, 02 03 99, 02 06 01, 02 07 01, 02 07 02, 02 07 99, 20 03 01, 20 03 02.

Changes to the permit conditions

Following the assessment of the information provided by the operator in response to the Regulation 61 Notice, summarised in table 1, we have made the following changes to the permit conditions:

- Condition 1.1.4 added because it is a relevant condition.
- Condition 2.5.1 has been deleted because the pre-operational condition is no longer relevant.
- Condition 3.1.3 has been reworded to make it site/operation specific.

- Table S1.1 as referenced in Condition 2.1.1 has been amended by applying relevant limits to the activities them.
- Table S1.2 as referenced in Conditions 2.3.1 and 2.3.2 has been amended to incorporate operating techniques documents received in response to the Regulation 61 Notice.
- Table S1.3 as referenced in Condition 2.4.1 has been amended to incorporate IC2 (previously PO1).
- Table S1.4 has been deleted because pre-operation condition PO1 has been moved into Table S1.3 as improvement condition IC2.
- Table S2.2 as referenced in Condition 2.3.4 has been amended by removing waste codes that do not reflect the waste types accepted by the installation or are not appropriate for the installation activity.
- Table S3.1 as referenced in Condition 3.5.1(a) has been amended to include relevant monitoring parameters and limits.
- Table S4.1 as referenced in Conditions 4.2.3 (a) and (b) has been amended to include appropriate reporting requirements.
- Tables S4.2 – S4.3 as referenced in Conditions 4.2.2 (b) and (c) respectively have been amended to include appropriate reporting requirements.
- Schedule 5 as referenced in conditions 4.3.2 and 4.3.4 has been amended by adding a new paragraph (c) to Part A requiring notification of breach of permit conditions not relating to limits.

Table 1 – Summary of our assessment of the operator’s Reg 61 response

Appropriate measures	Compliance status	Assessment of the installation’s compliance with relevant standards (appropriate measures) and any alternative techniques proposed by the operator
BAT 1 - EMS	CC	The operator has ISO14001 Environmental Management System in place. This includes management commitment, policy and procedures, planning, objectives and targets, communication, process control, training & awareness, emergency preparedness and response, evaluation of compliance legal and other, documentation, corrective action process, management review, internal auditing, monitoring, measuring and preventative maintenance.
BAT 2 - Waste pre-acceptance, acceptance and tracking appropriate measures	CC	<p>Only spent coffee grounds are accepted on site. No hazardous waste is accepted.</p> <p>Waste pre-acceptance, acceptance, tracking and rejection procedures are in place at the site.</p> <p>Staff are trained in the Standard Operating Procedure (SOP) for receiving, pile temperature and moisture checks, decontamination process, dryer infeed conveyors and drying system. Each load is inspected on arrival and moisture recorded. Each tip weight is recorded on Salesforce and on the company’s stock system.</p> <p>Waste is stored in a separate building to the main factory. Staff are trained in the SOP for delivery, storage and management of spent grounds.</p>
BAT 3 - Inventory of wastewater and waste gas streams	CC	<p>The dryer belt is washed weekly. This produces approximately 2.5 tonnes of water and coffee particles. This is collected into IBCs and taken off-site to an AD plant for treatment. The amount collected is recorded and entered into the quarterly waste return.</p> <p>Although the operator indicated that ‘no gas waste streams on site’, the operator is required to monitor emissions to air – the monitoring requirements are detailed in Table S3.1 of the permit.</p>
BAT 4 - Storage procedures	CC	<p>The storage arrangements for waste at the site are detailed within the Fire Prevention Plan and EMS. Spent Coffee Grounds (SCGs) are delivered to the Alconbury site at a moisture of ~60% and are stored on site for up to 2 weeks, under normal processing conditions. The site accepts solid, wet SCG produced from instant coffee factories, transport hubs, high-street coffee shops, cafes, restaurants and offices.</p> <p>Bagged and loose SCG are accepted on site and held in a storage area in building 4003. The storage area is designed to hold up to 500 tonnes of SCG. During normal operation, the factory will process the incoming SCG within 2 weeks of arrival on site. Daily feedstock receipt and storage quantities are detailed in section 8 of the Environmental Management System, a copy of which is kept in the Site Office.</p>
BAT 5 - Handling and transfer procedures	CC	SOP for delivery, storage and management of spent grounds is in place at the site. Grounds are tipped from the trucks onto the floor in building 4003. The grounds are put into the shredder using a Telehandler (trained staff only). They then go through the trommel and into the dryer. Buckets

		scooped and type of grounds are documented in the Production Sheets (F17) and Drying Record which shows amount in and out of the dryer.
BAT 6 - monitor key process parameters	NA	The dryer belt is washed weekly. This produces approximately 2.5 tonnes of water and coffee particles. This is collected into IBCs and taken off-site to an AD plant for treatment. The amount collected is recorded and entered into the quarterly waste return.
Bat 7 - monitor emissions to water	NA	Water is not used in the installation operations and wastewater is not generated as part of the treatment processes. Wash water is generated when the dryer belt is cleaned on weekly basis. This process generates about 2.5 tonnes of water and coffee particles. This is collected into IBCs and taken off-site to an AD plant for treatment. The amount collected is recorded and entered into the quarterly waste return.
BAT 8 - monitor channelled emissions to air	CC	There are three channelled emissions to air monitoring points at the site. We have specified the relevant monitoring parameters and limits within Table S3.1 of the permit. The operator indicated that the monitoring stacks are tested in line with the permit requirements and in line with the following standards and procedures EN13284-1, EN14790, MCERTS and UKAS ISO/IEC 17025 Accredited Testing Laboratory No. 4279. As part of this review and in line with the <u>Waste Treatment BAT Conclusions</u> , we have amended the dust limit for A2 from 30mg/m ³ to 5mg/m ³ . The monitoring requirements and limits for particulate matter, oxides of nitrogen and carbon monoxide specified for the emission point, A3 are in line with the Medium Combustion Plant Directive (MCPD).
BAT 9 - monitor diffuse emissions of organic compounds to air	NA	The activities at the site do not involve regeneration of spent solvents, the decontamination of equipment containing POPs with solvents or the physico-chemical treatment of solvents for the recovery of their calorific value. This BAT is considered not applicable.
BAT 10 - monitor odour	NA	Odour risk is rated as low in the Environmental Risk Assessment. Given that most of the site activities are carried out within enclosed buildings and there is no history of odour complaints at the site, an odour management plan is considered not relevant. The site has odour control systems which distribute a chemical/water mix into the atmosphere by means of misting nozzles. The odour control systems (Airbourne 10) are placed at specific intervals to intercept and absorb odours and dust. These are regularly checked and maintained.
BAT 11 - monitor consumption of water, energy and raw materials, and generation of residues and wastewater	CC	Consumption of mains water, energy, raw materials as well as the generation of residues and wastewater are monitored at the site. Monitoring and Measuring and Analysis Procedure is in place. The operator indicated that electricity and water meters are read on weekly basis. Raw materials used are recorded within the purchasing system - on the stock logger and Salesforce. All waste in

		and out is documented. There is a condition in the permit which requires the operator to submit a report each year for water, energy and raw materials usage.
BAT 12 - odour management plan	NA	Odour risk is rated as low in the Environmental Risk Assessment. Given that most of the site activities are carried out within enclosed buildings and there is no history of odour complaints at the site, an odour management plan is considered not relevant. The site has odour control systems which distribute a chemical/water mix into the atmosphere by means of misting nozzles. The odour control systems (Airbourne 10) are placed at specific intervals to intercept and absorb odours and dust. These are regularly checked and maintained.
BAT 13 - reduce odour emissions	NA	Odour risk is rated as low in the Environmental Risk Assessment. Given that most of the site activities are carried out within enclosed buildings and there is no history of odour complaints at the site, an odour management plan is considered not relevant. The site has odour control systems which distribute a chemical/water mix into the atmosphere by means of misting nozzles. The odour control systems (Airbourne 10) are placed at specific intervals to intercept and absorb odours and dust. These are regularly checked and maintained.
BAT 14 - reduce diffuse emissions to air	CC	<p>The storage arrangements for waste at the site are detailed within the Fire Prevention Plan and EMS. Spent Coffee Grounds (SCGs) are delivered to the Alconbury site at a moisture of ~60% and are stored on site for up to 2 weeks, under normal processing conditions. The site accepts solid, wet SCG produced from instant coffee factories, transport hubs, high-street coffee shops, cafes, restaurants and offices. Limited quantities of unprocessed waste are stored for longer than 24 hours.</p> <p>Bagged and loose SCG are accepted on site and held in a storage area in building 4003. The storage area is designed to hold up to 500 tonnes of SCG. During normal operation, the factory will process the incoming SCG within 2 weeks of arrival on site.</p> <p>All of the site operations are carried out within enclosed buildings with doors that are kept closed when deliveries and collections are not being made. All vehicles delivering waste or transporting waste from the site are covered. The operator confirmed that there is regular housekeeping of site surfaces to remove litter and debris.</p>
BAT 15 - minimise use of flaring	NA	Given the nature of the waste treatment operations, we agree that this BAT is not applicable.
BAT 16 - reduce emissions to air from flares	NA	Given the nature of the waste treatment operations, we agree that this BAT is not applicable.
BAT 17 - noise and vibration management plan	NA	The operator indicated that the site does not currently have a dedicated Noise Management Plan (NMP). The operator indicated that Environmental Risk Assessment does not have risk of noise impact on the local amenities and receptor. All of the site operations are carried out within enclosed buildings with doors that are kept closed when deliveries and collections are not being made.

		<p>Based on the results of our internal noise screening, we are satisfied that noise impact assessment and management plan are not required. We have not received noise complaints against the site, and as such, we have decided that a noise impact assessment and noise management plan are not required.</p> <p>The operator is committed by the permit condition to submit a dedicated Noise Management Plan if it is discovered in the future that noise from the site is giving rise to pollution in areas outside of the site boundary.</p>
BAT 17 - noise and vibration management plan	NA	<p>The operator indicated that the site does not currently have a dedicated Noise Management Plan (NMP). The operator indicated that Environmental Risk Assessment does not have risk of noise impact on the local amenities and receptor. All of the site operations are carried out within enclosed buildings with doors that are kept closed when deliveries and collections are not being made.</p> <p>Based on the results of our internal noise screening, we are satisfied that noise impact assessment and management plan are not required. We have not received noise complaints against the site, and as such, we have decided that a noise impact assessment and noise management plan are not required.</p> <p>The operator is committed by the permit condition to submit a dedicated Noise Management Plan if it is discovered in the future that noise from the site is giving rise to pollution in areas outside of the site boundary.</p>
BAT 19 - optimise water consumption, reduce wastewater and prevent or reduce emissions to soil and water	CC	<p>Water is not used in the installation operations and wastewater is not generated as part of the treatment processes.</p> <p>Wash water is generated when the dryer belt is cleaned on weekly basis. This process generates about 2.5 tonnes of water and coffee particles. This is collected into IBCs and taken off-site to an AD plant for treatment. The amount collected is recorded and entered into the quarterly waste return.</p>
BAT 20 - waste water treatment	NA	<p>Wastewater is not being treated at on site. Water is not used in the installation operations and wastewater is not generated as part of the treatment processes.</p> <p>Wash water is generated when the dryer belt is cleaned on weekly basis. This process generates about 2.5 tonnes of water and coffee particles. This is collected into IBCs and taken off-site to an AD plant for treatment. The amount collected is recorded and entered into the quarterly waste return.</p>
BAT 21 - prevent or limit the environmental consequences of accidents and incidents	CC	<p>Site is fenced and secure. Gatehouse and security measures are in place at the site. Emergency preparedness and response procedures are also in place. There are emergency plans for fire, serious accident, pollution incident response, spillages. Accident and incidents are logged under Health & Safety or ISO14001 - corrective action system and investigation to prevent reoccurrence are in place.</p>

BAT 22 - substitute materials with waste	NA	There is limited use of raw materials within the waste processing activity. The overall operation of the site involves turning waste into fuel.
BAT 23 - Energy efficiency plan, energy balance record	CC	Energy usage and raw materials efficiency are continually recorded and monitored to produce cost of goods (COGS) and to identify opportunities for improvement. Delivered energy is recorded weekly. No energy is exported.
BAT 24 - maximise reuse of packaging	CC	Goods from Costa are delivered in plastic bags via tipping skip. The bags cannot be recycled as low-quality plastic, approx. 4% which goes to RDF. Nestle coffee is free from packaging. Some drums are delivered. They are collected by supplier and reused. The Feedstock Approval Form requests information on packaging type and dimensions of future deliveries. The supplier will be rejected if they cannot deliver in suitable, returnable/recyclable or minimum packaging. IBC's for collecting wash water are reused.
BAT 25 - General - Emissions to air (Techniques to reduce plus AEL for dust).	CC	Although the operator stated that there is no mechanical treatment of waste at the site, we have noted that the operator is using shredder and trommel as part of the installation. We are satisfied that dust emissions at the channelled emission points are contained and controlled using filter bags.
BAT 26 - Metal shredders (Reduce accidents & incidents)	NA	The site activities do not involve mechanical treatment in shredders of metal waste and as such, it is considered that this BAT is not applicable.
BAT 27 - Deflagrations (Prevent & reduce emissions from deflagrations)	NA	Same as above (re: BAT 26).
BAT 28 - Energy efficiency (Shredder feed stability)	NA	Same as above (re: BAT 26).
BAT 29 - WEEE containing VFCs and/or VHCs (Emissions of organic compounds to air including AELs)	NA	Same as above (re: BAT 26).
BAT 30 - Explosions when treating WEEE (Prevent emissions due to explosions)	NA	Same as above (re: BAT 26).
BAT 31 - Emissions to air (Techniques to reduce emissions to air including AEL)	CC	Although the operator stated that there is no mechanical treatment of waste at the site, we have noted that the operator is using shredder and trommel as part of the installation. We are satisfied that dust emissions at the channelled emission points are contained and controlled using filter bags.
BAT 32 - WEEE containing mercury (Emissions to air including AEL)	NA	No WEEE is accepted and/or treated as part of the Installation activities.

BATs 33 - 53	NA	We considered that BATs 33 - 53 are not applicable to installations that are producing SRF. We consider SRF treatment as mechanical treatment of waste.
Reg. 61 Request for Further Information (RFI)	Assessment of response received	
We did not send a request for further information following the submission of the Regulation 61 Notice. The information submitted by the operator in response to the Regulation 61 Notice and additional information received on the 02/11/2022 with regards to the waste types were considered adequate.		